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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,068	01/16/2002	Armin Walter Bruderlin	080398.P237C	3460

7590 05/03/2005	EXAMINER
Maria McCormack Sobrino	WANG, JIN CHENG
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP	

ART UNIT	PAPER NUMBER
2672	

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DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/052,068	BRUDERLIN, ARMIN WALTER
	Examiner	**Art Unit**	
	Jin-Cheng Wang	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/12/2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12 and 65-75* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12 and 65-75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)		4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)		Paper No(s)/Mail Date. _____ .
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)		5) ☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____ .		6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

Applicant's submission filed on 11/12/2004 has been entered. Claims 1-11, 13-64 have

been canceled. Claims 65-75 have been newly added. Claims 12, and 65-75 are pending in the

application.

Response to Arguments

Applicant's arguments filed Nov. 12, 2004 have been fully considered but are moot in

view f the new ground(s) of rejection of the amended claim 12 and the newly submitted claims

65-75.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 12, 65-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Y.

Watanabe and Y. Suenaga, "A trigonal prism-based method for hair image generation", IEEE

Computer Graphics and Applications, 17(3), May 1997, p. 47-53 (hereinafter Watanabe) in view

of D. B. Goldman, "Fake Fur Rendering", Proc. Of the 24 th Annual Conf. On Computer

Graphics and Interactive Technique, p. 127-134, Aug. 1997 (hereinafter Goldman) and Ueda et

al. U.S. Patent No. 6,333,985 (hereinafter Ueda).

1. Claim 12:

Watanabe teaches a method comprising:

Modifying at least one area of hair to provide a visual effect to the area of hair in response to an external influence (*e.g., modifying at least one triangle patch by changing one of the parameters that determine the style of the wisp to provide a visual effect of a wisp of hairs in response to the head move in a certain direction; page 52*), comprising for an area (for a triangle patch);

Identifying a hair of a plurality of hairs of the area as a clump-center hair (*e.g., identifying a single hair for a wisp wherein a single hair duplicated hundreds of times in the neighborhood in an area patch or a triangle patch becomes a center hair and there is a center hair associated with the wisp; see page 52*);

Identifying an area size (*e.g., the number of triangle patches for a human head model determines or identifies the size of triangle patches; page 51; and the hair density M for each triangle patch determines the number of hairs in a wisp which controls the hair thickness or selecting the number of triangle patches in the scalp area wherein both the scalp area size is identified and the triangle patch size is identified; page 50-51*);

Indicating clump area parameters including clump-density, clump-size, and clump-percent (*e.g., the area parameters are angle, bend, **ratio** control, **thickness** controls, **length** controls, fold controls, **density** controls, randomness controls, RGB control, wave controls for the wisp; see page 51; the scalp area size is identified and the **triangle patch size** is identified; page 50-51*);

Determining hairs of the plurality of hairs that are within the area as clump area hairs

(*e.g., the area hairs are within the triangle patch wherein a single hair is duplicated hundrends*

of times in the neighborhood of the single hair in the triangle patch; page 52), the area located

according to the clump-center hair (*the single hair within the triangle patch*) and area size (*the*

size of the triangle patch is determined by the number of triangle patches used for a human head

model), and

Orienting the clump area hairs (*hairs in the triangle patch*) according to the clump area

parameters including clump-density, clump-size, and clump-percent (*e.g., hairstyles are*

controlled by the wisp parameters and the parameters' length, direction vector, thickness, twist

angle, and number of trigonal prisms define the hair model; page 49; and a small number of

parameters can be controlled to determine the hair motions; page 52); and

Dynamically varying the clump area parameters including clump-density, clump-size,

and clump-percent (*e.g., the wisp parameters are the clump parameters being dynamically*

varied in response to head motion to provide the animated effect in the computer animation of

hair; page 52).

However, Watanabe failed to disclose "producing a plurality of hairs representative of a

coat of fur."

Goldman discloses the claim limitation of "producing a plurality of hairs representative

of a coat of fur (Pages 127-131). For example, Goldman teaches a fakefur algorithm for

rendering hairs on mamal fur (Page 130) including application to the rendering of most of the

computer-generated dalmatians featured in the film in which the realfur hair renderer is

employed. The rendering is parameterized on hair geometry on a surface by hair length, hair

radius, density of hairs, and hair tangents at the root and tip and the parameters for the hairs in a particular region may vary over the surface (Page 128) and hair parameter can be adjusted to increase or decrease the density of the hair-over-hair shadows (Page 130).

It would have been obvious to one of ordinary skill in the art to have incorporated Goldman's realfur hair rendering into Watanabe's method because Goldman also teaches other limitation set forth in the claim 12 such as adjusting hair parameters over a local region and changing the opacity of the hair in relation to the hair parameters (Goldman Page 130).

One of the ordinary skill in the art would be motivated to do this because incorporating hairs representative of a coat of fur in the fake/real fur rendering simulates the varying degrees of the appearance of real mammalian fur (Goldman Page 128).

However, Watanabe and Goldman failed to disclose the claim limitation of "making the fur appear increasingly wet and to provide a variety of dry-to-wet appearance with the claim limitation of "dynamically varying the clump area parameters including clump-density, clump-size, and clump-percent to make the fur appear increasingly wet and to provide a variety of dry-to-wet appearances."

Ueda discloses adjusting a variety of hair styles including the Dry hairstyle and Wet hairstyle and changing from one hairstyle to another hairstyle (See Figs. 38-39 and column 8, lines 10-26 of Ueda) and therefore Ueda teaches making the hairs appear increasingly wet by changing the dry hairstyle to wet hairstyle and to provide a variety of dry-to-wet appearance when other combinations of the hairstyle are adjusted (Figs. 38-39 and column 8, lines 10-26 of Ueda).

It would have been obvious to one of ordinary skill in the art to have incorporated simulating wet hairs and making the hairs increasing wet of Ueda into Watanabe and Goldman's method to simulate the hairs on the mammal fur of Watanabe and Goldman and making the hairs increasing wet by changing the hairstyle using the Ueda's method to provide a variety of dry-to-web appearance (because Anderson also teaches other limitation set forth in the claim 18 such as hair animation (Figs. 38-39 and column 8, lines 10-26 of Ueda).

One of the ordinary skill in the art would be motivated to do this because this simulates the hairs to generate different hairstyles (Figs. 38-39 and column 8, lines 10-26 of Ueda). One of the ordinary skill in the art would be motivated to do this because incorporating hairs representative of a coat of fur in the fake/real fur rendering simulates the varying degrees of the appearance of real mammalian fur (Goldman Page 128).

Claim 65:

The claim 65 encompasses the same scope of invention as that of the claim 12 except additional claim limitation of the clump area parameters are dynamically varied to provide animated clumping effects. However, Watanabe further discloses the claim limitaiton of the at least one area parameter being dynamically varied to provide animated effect (*e.g., the wisp parameters are the clump parameters being dynamically varied in response to head motion to provide the animated effect in the computer animation of hair; page 52*).

Claim 66:

The claim 66 encompasses the same scope of invention as that of the claim 12 except additional claim limitation of adjusting a tip of each clump hair to be closer to the tip of the clump-center hair, the amount of closeness corresponding to the clump-percent. However, Watanabe further discloses adjusting the *hairs in the triangle patch* according to the clump area parameters in which *hairstyles are controlled by the wisp parameters and the parameters' length, direction vector, **thickness**, twist angle, and number of trigonal prisms define the hair model; page 49; and a small number of parameters can be controlled to determine the hair motions; page 52.* Goldman discloses the claim limitation of "producing a plurality of hairs representative of a coat of fur (Pages 127-131). For example, Goldman teaches a fakefur algorithm for rendering hairs on mamal fur (Page 130) including application to the rendering of most of the computer-generated dalmatians featured in the film in which the realfur hair renderer is employed. The rendering is parameterized on hair geometry on a surface by hair length, hair radius, density of hairs, and hair tangents at the root and tip and the parameters for the hairs in a particular region may vary over the surface (Page 128) and hair parameter can be adjusted to increase or decrease the density of the hair-over-hair shadows (Page 130).

Claim 67:

The claim 67 encompasses the same scope of invention as that of the claim 12 except additional claim limitation of adjusting a tip of each clump hair to be closer to the tip of the clump-center hair, the amount of closeness corresponding to the clump-percent. However, Watanabe further discloses adjusting the *hairs in the triangle patch* according to the clump area parameters in which *hairstyles are controlled by the wisp parameters and the parameters' length, direction vector, **thickness**, twist angle, and number of trigonal prisms define the hair*

model; page 49; and a small number of parameters can be controlled to determine the hair

motions; page 52. Goldman discloses the claim limitation of "producing a plurality of hairs

representative of a coat of fur (Pages 127-131). For example, Goldman teaches a fakefur

algorithm for rendering hairs on mamal fur (Page 130) including application to the rendering of

most of the computer-generated dalmatians featured in the film in which the realfur hair renderer

is employed. The rendering is parameterized on hair geometry on a surface by hair length, hair

radius, density of hairs, and hair tangents at the root and tip and the parameters for the hairs in a

particular region may vary over the surface (Page 128) and hair parameter can be adjusted to

increase or decrease the density of the hair-over-hair shadows (Page 130).

Claim 68:

The claim 68 encompasses the same scope of invention as that of the claim 12. The claim

68 is subject to the same rationale of rejection set forth in the claim 12.

Claim 69:

The claim 69 encompasses the same scope of invention as that of the claim 65. The claim

69 is subject to the same rationale of rejection set forth in the claim 65.

Claim 70:

The claim 70 encompasses the same scope of invention as that of the claim 66. The claim

70 is subject to the same rationale of rejection set forth in the claim 66.

Claim 71:

The claim 71 encompasses the same scope of invention as that of the claim 67. The claim

71 is subject to the same rationale of rejection set forth in the claim 67.

Claim 72:

The claim 72 encompasses the same scope of invention as that of the claim 12. The claim

72 is subject to the same rationale of rejection set forth in the claim 12.

Claim 73:

The claim 73 encompasses the same scope of invention as that of the claim 65. The claim

73 is subject to the same rationale of rejection set forth in the claim 65.

Claim 74:

The claim 74 encompasses the same scope of invention as that of the claim 66. The claim

74 is subject to the same rationale of rejection set forth in the claim 66.

Claim 75:

The claim 75 encompasses the same scope of invention as that of the claim 67. The claim

75 is subject to the same rationale of rejection set forth in the claim 67.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw

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